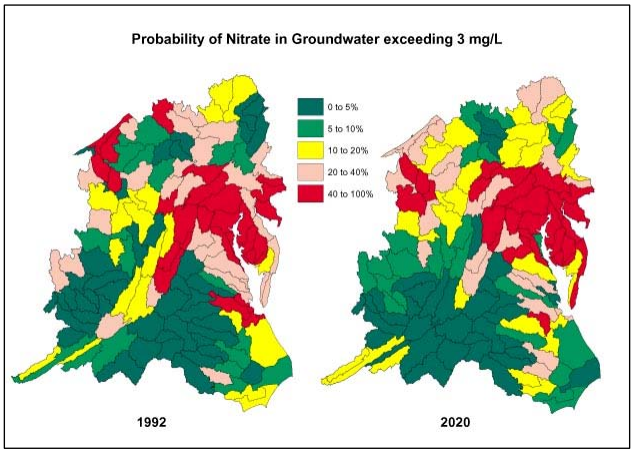
Decision Tools for Sustainability

February 18, 2004

On February 18, 2004, the U.S. Environmental Protection Agency and Department of Energy signed a Memorandum of Understanding to expand the research collaboration of both agencies to advance biological, environmental, and computational sciences for protecting human health and the environment and fostering a secure, reliable, and economically sustainable energy system. This fact sheet describes a collaborative research area and the expertise each agency brings.

DOE and EPA's collaborative efforts will focus on a variety of research tools and modeling activities that contribute to informed decisions and policies in environmental protection, development of new environment and energy technology, sustainable energy use, ecological monitoring, analysis of material flows, and environmental and facilities clean-up.

ReVA Decision Toolkit



Previous collaboration between DOE's Oak Ridge National Laboratory and EPA was critical to the development of decision support models that allow decision-makers at regional to local scales to evaluate future changes in natural and manmade ecosystems from changes in current and anticipated stressors on the environment. Collaboration on the underlying scientific methodologies led to the development of the Regional Vulnerability Assessment (ReVA) Environmental Decision Toolkit (EDT) – a basic integration and visualization toolkit used by EPA and partners in state and local government to address a suite of assessment questions crucial to reducing ecological risk. Application of this environmental decision toolkit is being widely demonstrated in many parts of the U.S. An important element of the planned DOE-EPA collaboration is to focus on issues relevant to decision-makers at all levels of government.

Tracking the state of the environment

Future activities will focus on development and implementation of sensing, data collection, and information synthesis for measuring and tracking the state of the environment, and on the development of data, tools, and analyses relating to how decisions we make today will affect environmental conditions in the future. Achieving sustainable economic growth requires a strong research foundation in developing clean and efficient energy systems, improved understanding of the impact of cumulative stresses on ecological systems, and informed decision-making that considers all facets of the economy, social well-being, and the ecological system.

Energy Efficiency

Both DOE and EPA have extensive research and outreach programs promoting sustainable energy use. Together, the agencies will embark on development and adoption of cleaner energy and energy efficiency technologies and work jointly to transfer new information, products, and tools to other Federal, regional, state and tribal, and local institutions.